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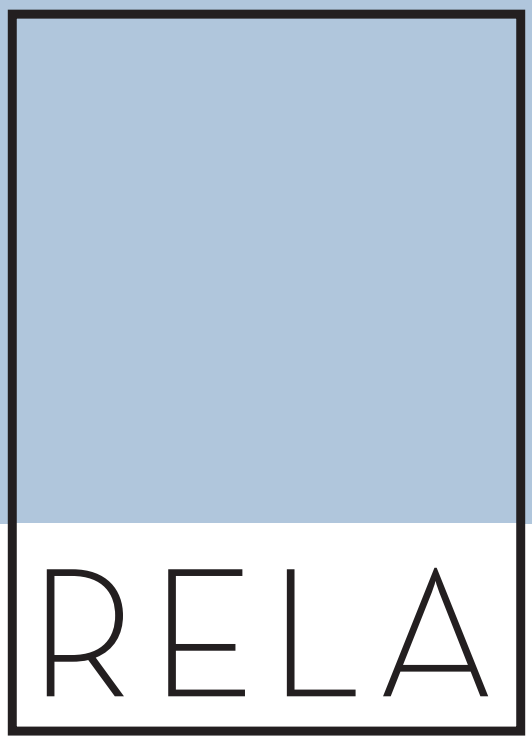
European journal for Research on the Education and Learning of Adults 10 (2019) 3, S. 261-274

Active ageing, social inclusion and wellbeing



European Journal for Research on the Education and Learning of Adults

2019, Vol. 10, No.3

RELA

European Journal for Research
on the Education and Learning of Adults

Volume 10, No. 3, October 2019

Linköping University Electronic Press
ISSN 2000-7426
www.rela.ep.liu.se

Editorial board

European Journal for Research on the Education and Learning of Adults – RELA

VOLUME 10 NUMBER 3 OCTOBER 2019

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European Journal for Research on the Education and Learning of Adults, Vol.10, No.3, 2019, pp. 261-274

Focussing on tutoring skills instead of learners' disadvantages in teenaged tutors' training for intergenerational learning programmes

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Abstract

In the twenty-first century non-professional tutors, including teenagers, have an important role to play in the development of contemporary skills among the older population. Scholars in the field of older-age learning share a common belief that age-specific knowledge should be introduced and implemented when instructing older people. At the same time, psychologists warn that only perceived similarities between members of an in-group and out-group can reduce the age stereotypes they may hold. Therefore, focussing on age-specific knowledge in preparing teenaged tutors for instructing older individuals in the acquisition of e-skills would not support age-stereotype dilution in intergenerational programmes. An alternative idea is introduced by analysing the connections between geragogical principles and the nature of scaffolding assistance. It is proposed to focus on tutors' scaffolding skills instead of older learners' peculiarities when preparing teenaged tutors. The theoretically grounded idea will need to be validated by future empirical studies.

Keywords: Acquisition of e-skills; age-specific knowledge; intergenerational learning; scaffolding; tutoring

Introduction

Despite numerous studies that demonstrate the positive impact of learning and social inclusion in later life on both the individual and society, purposeful social activity and older-age learning can also have negative side effects. The profile of the participants as well as the principles underlying the learning process may have an undesirable effect on older-age learning.

ISSN 2000-7426

DOI 10.3384/rela.2000-7426.rela20198
www.rela.ep.liu.se

For example, if an older individual's learning and social participation only involves activities in a day centre, which is a widespread form of older-age learning in many countries (Findsen & Formosa, 2016), the learning occurs in a rather age-segregated group. At the same time we know that older individuals, especially those with lower self-awareness (Chen, Pethtel & Ma, 2010), who have little interaction with young people tend to assign highly stereotyped scores to themselves (Hernandez & Gonzalez, 2008), e.g., older individuals tend to agree with the stereotype that they are less competent (Kite, Stockdale, Whitley & Johnson, 2005). Paradoxically, the segregation of older people has been perceived as a benefit, as opposed to the segregation of younger people, which is viewed as a social problem that can have negative behavioural consequences (Hagestad & Uhlenberg, 2005). Studies on older individuals' participation in learning are often lacking in a deeper examination of the details, i.e., the studies are likely to 'focus[ing] on the individual more than the organization and treat[ing] involvement in one group roughly equivalent to that of another, despite a wide variation in their goals, functions, and membership' (Barrett, Pai & Redmond, 2012, p. 527). Such an approach is characteristic of the The Survey of Health, Ageing and Retirement in Europe (SHARE) survey, which only queries respondents on their participation, on the basis of which conclusions have been drawn and recommendations formulated (Golinowska, Sowa, Degg, Socci, Principi, Rodrigues, Ilinca, & Galenkamp, 2016; Litwin & Stoeckel, 2016; Potočnik & Sonnentag, 2013). In addition to the attributes of the parties involved, there are aspects of the learning process that are crucial to preventing negative effects on older individuals' learning. Reciprocity is one of the key principles of older-age learning (Formosa, 2012) as it is an important component of the theory of intergenerational learning (Thomas, 2012). Therefore, in a tutoring interaction in which a more knowledgeable person instructs one who is less knowledgeable, some particular aspects need to be taken into account in order to avoid negative effects. For example, it has been demonstrated that a *dominating style* of tutoring by a more competent party tends to produce submissive behaviour on the part of the learner, which is not conducive to the cognitive development of the less competent party (Arcidiacono, Baucal, & Buđevac, 2011). On the other hand, *uncertainty, confusion or doubt* expressed by the competent party may also not support the cognitive development of the learner, i.e., the desired acquisition of skills may not occur (Tudge, 1990, in Arcidiacono et al., 2011). Furthermore, *hesitant and illogical* tutoring-learning interactions may have a negative impact on the cognitive development of even the more competent party (Ibid.).

Many articles about tutoring strategies and techniques for instructing older learners provide a valuable basis for identifying pedagogical practices that should be avoided when creating learning environments for older people. For example, in the survey conducted by Eppinger, Schuck, Nystrom and Cohen (2013) it was shown that positive and negative feedback seemed to have a similar impact on older individuals' learning; later, however, older learners were better able to recall from memory content that had received positive feedback. Bozoki, Radovanovic, Winn, Heeter and Anthony (2013) demonstrated in a study of computer games designed to improve older individuals' cognitive abilities that the expected learning outcomes would not be achieved if the task failed to consider the existing knowledge and experience of the older learner, i.e., the tasks were too simple. Czaja, Charness, Fisk, Hertzog, Nair, Rogers and Sharit (2006) emphasised the importance of perceived success on the part of older learners in every instance and interaction when introducing an unfamiliar technology, or they might not have the courage to experiment, which increases the likelihood of their abandoning technological learning. De Guerrero and Villamil (2000) caution that an authoritarian and

descriptive style of tutoring hampers the effectiveness of older individuals' learning process.

Scholars in the field of older-age learning share a common belief that age-specific knowledge (Cohen, 2006; Deary, Corley, Gow, Harris, Houlihan, Marioni, Penke, Rafnsson & Starr, 2009) should be introduced when instructing older people. Lemieux and Martinez (2000, p. 485) have stated that the success and value of educational intervention would be hampered without the critical contribution of gerontology and its theories concerning the personal and social reality of older people. This notion is derived from the fact that differences in learning abilities and preferences for study methods are related to older age (Findsen & Formosa, 2011; John, 1981; Nussbaum & Coupland, 2008; Pincas, 2007; Requejo-Osorio, 2008). Despite the fact that the group of "old age learners" comprises individuals from different cohorts and different generations which is a relational term (Ropes, 2013) in current paper we consider an old age learners as one whole referring to the third and fourth age in Laslett's (1996) theory of four ages, Older people form a non-homogeneous group in which strictly defined age groups do not express age specific differences between individuals and their learning abilities. Therefore the Laslett's approach on old age is applicable as it derives from two terms that have an effect on person's learning motivation and ability: personal duties and person's dependence.

The objective changes affecting the ability to learn may be related to reduced speed of cognitive processes, concerns about worsening short-term memory, impaired fluid intelligence or decreased sensory-perceptive functions (e.g., vision) (e.g., Baringer, Kundrat & Nussbaum, 2008; Cohen, 2006). It is commonly held that the cognitive load must be reduced for older learners (Cohen, 2006; Echt, Morrell, & Park, 1998; Morrell, Park, Mayhorn & Kelley, 2000), and that situations in which learners must divide their attention between computer keyboard and textbook must be minimised (Tambaum, 2015), which have implications for organising learning, to give some examples. Reference has also been made to age-related social changes that may have an impact on learning in the third or fourth age (Laslett, 1996) (e.g. Battersby, 1985; Lodge, Carnell & Comelan, 2016) such as diminished external duties and responsibilities which may result in taking less personal responsibility for one's achievement in an unsuccessful training session (Formosa, 2002).

Various authors have formulated tutoring principles to meet the needs resulting from age-related cognitive and social changes in individual ageing. A comprehensive description of 13 of these principles is provided in an article by Tambaum (2015) based on the results of studies by Meyer (1977), John (1981), Xie (2007), Echt, Morrell, and Park (1998) and Cody, Dunn, Hoppin and Wendt (1999). These authors emphasize that the tutor must incorporate flexibility and enjoyability into the learning-tutoring process. Learners need to be provided with the opportunity to be an active learner, and to have a chance to act independently and autonomously. The tutor must consider the learners' diversity; their sense of security must be supported as well as their feeling of success. All aspects and components of learning organisation should respect the principles of sustainability, quality and comfort. These principles highlighted by the authors are applicable to both the development of skills and the acquisition of general knowledge.

The concept of intergenerational learning

In the twenty-first century, questions about effective tutoring principles and age-specific knowledge are not only relevant to professional trainers. UNESCO's Future Perspectives on Lifelong Learning includes community learning, one of the aims of which is the provision of support for older learners (UIL, 2015). Bruner (1996) sees community learning as an integral part of the education system. According to this framework non-professional tutors have an important role to play in the older population's acquisition of contemporary skills, especially digital skills, as the share of adults who lack basic e-skills is notably high – 2/5 of those aged 16–74, most of whom are in the older groups (European Commission, 2017). Strom and Strom (2011, 2012) consider youth as a segment of society that not only supports but also shoulders responsibility for teaching new technology.

Learning that involves different generations is called intergenerational learning (IGL), and its programmes have been defined as 'vehicles for the purposeful and ongoing exchange of resources and learning among older and younger generations' (Hutton Yeo & Osako, 2000, p. 6). Such programmes aim to bring people together in purposeful, mutually beneficial activities, which promote greater understanding and respect between generations and may contribute to building more cohesive communities (FIM-NewLearning, 2008). One of the aims of IGL programmes is to maintain the relationships that emerge during the activities (Buffel, De Backer, Peeters, Phillipson, Reina, Kindekens, De Donder & Lombaerts, 2014). As with older-age learning, also IGL based on false criteria is not just a waste of time but can even have damaging consequences, and if the relationship between the older and younger individuals perpetuates or exacerbates negative stereotypes, then it is preferable to do nothing (Freedman, 1992). MacCallum, Palmer, Wright, Cumming-Potvin, Brooker and Tero (2010), in their analysis of the efficiency of intergenerational practice, have identified the key features of successful programmes. One aspect that has an impact on the benefit participants receive from intergenerational learning is the consideration of the specific needs of the participants, including those related to age. MacCallum and colleagues (2010) also referred to the specific need arising from second important characteristic – gender. But in the context of e-skills acquisition in the form of individual tutoring, there are few arguments to differentiate older learners on the base of sex. As Chiu and Liu (2017) have pointed, there exist differences between older men and women when it applies to Internet withdrawal, but they are not different in Internet adoption, that means when acquiring e-skills.

Traditionally, the direction of the flow of knowledge between individuals in IGL has been from the older generation to the younger. Nevertheless, scholars have examined *reverse mentoring* relationships, in which the direction of the flow is reversed from younger to older (Gerpott, Lehmann-Willenbrock & Voelpel, 2017; Ropes, 2013), such as in teaching how to use new technologies (Ropes, 2013). The basic premise of the *unidirectional* approach is that a more knowledgeable person transfers information to a less experienced individual (Gerpott et al., 2017). Despite the fact that programmes of intergenerational *reverse mentoring* have become common practice in communities, especially in the field of new technology (e.g., cyber-seniors.ca/get-involved/become-a-cs-mentor; genyes.org/resources; www.geengee.eu/geengee/; www.intergenerational-ictskills.eu/cms/) and that a tutor plays a key role in ensuring the success of older-age learning (Duay & Bryan, 2008), relatively little is known about the tutoring behaviour of young non-professional instructors.

It has been shown that in an IGL framework in which teenagers serve as naturalistic tutors (Chi, Siler, Jeong, Yamauchi & Hausmann, 2001; Graesser, Person & Magliano, 1995) facilitating the acquisition of older individuals' e-skills, young tutors tend not to consider age-specific needs (Tambaum, 2017; Tambaum & Normak, 2014). Without preparation for the session they tend to use a rather authoritarian and prescriptive style (Tambaum & Normak, 2018), which can disempower the learner (Tambaum & Normak, 2014) and should be avoided due to age-related cognitive and social changes. An unaddressed need for extra time was observed during steps that required older learners to divide their attention (Tambaum, 2017). The pace of tutoring tended to be brisk, especially when the tutor was following a predefined programme or manual (Tambaum & Normak, 2014). Even without a manual, the tutor was inclined to be somewhat hurried, as seen in Example 1 (Tambaum, 2017).

Example 1
The following interaction between a teenaged tutor and older learner took place within two seconds:

Tutor: Now delete.
Tutor: Do you remember how to delete?
Tutor: This (points to the key).

The need for preparatory training for teenaged tutors has been mentioned by several authors (Strom & Strom, 2012; Tambaum, 2017; Tambaum & Normak, 2018). Teater (2018) in her qualitative research found that young people who were not prepared for intergenerational practice did not know what to expect from the interaction with older people and were concerned about what they should say. Therefore, the need for preparation would also seem reasonable from the young tutors' perspective.

It has been proposed that a preparatory programme for teenaged e-skill tutors should include the ability to accompany their technical instructions with explanations about the purpose of and reasons for the learning tasks as well as cause-and-effect relationships (Tambaum & Normak, 2014). Young tutors should learn about the function of learners' mistakes in the instructing process, and they should be trained to avoid intervening in some circumstances (Tambaum, 2017). There is also a need to introduce interactive tutoring techniques to teenagers and to increase their awareness of the hazards associated with sharing tacit knowledge (Tambaum & Normak, 2018).

Despite our suggestions in previous papers that it is necessary to provide explicit age-specific knowledge about older learners (e.g., reduced cognitive speed, difficulty dividing attention the need to eliminate external irritators, decreased short-term memory) when preparing young tutors for IGL, in this paper we raise the question of whether it is justified.

It has been shown that children and teenagers can possess rather negative stereotypes about older people (Meshel & McGlynn, 2004). One must also be mindful that according to the capitalist paradigm age-specific differences may be viewed as disadvantages (Fenwick, 2012). Young people enter the interaction with pre-existing views of older people, which makes them more liable to focus on the differences between themselves and older adults, to distinguish themselves in terms of age, and to describe their thoughts, feelings and beliefs about older adults in more negative terms (Teater, 2018). Meshel and McGlynn (2004) conducted a survey in which young people (aged 11–13 years) participated in 'a variety of educational activities designed to increase their knowledge and sensitivities regarding older persons and the aging process'. They found that such targeted preparation had no effect on the negative stereotypes held by young people, nor

did the information presented to them augment their positive beliefs about older people (Ibid.).

One possible explanation is that once formed, stereotypes are resistant to change (Stangor & Lange, 1994 in Meshel & McGlynn, 2004). In fact, casual contact with the target group often reinforces pre-existing stereotypes (Ibid.). However, one of the few possible means of "stereotypic dilution" (Hilton & Fein, 1989) is to make out-group and in-group representations more similar (Devine, 1989 in Meshel & McGlynn, 2004). In other words, the young person must be given the opportunity to interact with the older person, and the type of activity must be designed to reveal the similarities between them. The age-specific knowledge provided to teenaged tutors prior to contact with older learners would have the opposite effect.

Furthermore, might not this approach to preparation for learning sessions produce a 'stereotype threat effect' with regard to older learners (Abrams, Eller, & Bryant, 2006) that could affect their performance? Jordano and Touron (2017) have shown that stereotype threat is associated with significantly increased distraction and decreased memory function among older learners. Providing young tutors with age-specific knowledge might also have adverse consequences because older people are not a homogeneous group: older learners would not all have the same needs.

Some surveys indicate that there are exceptions to teenaged tutors' inability to consider older learners' special needs in a tutoring interaction**.** We have ascertained that teenaged tutors never hurried learners when they were typing on the keyboard (Tambaum, 2017). It can therefore be deduced that young tutors are able to take the slower cognitive processes of older learners into consideration, not because of their knowledge of such age differences but because they believe that older learners *are able* to perform the particular task without help. In another instance (Ibid.) we saw that young tutors curtailed their interruptions only when they were confident in the learner's ability to fulfill the particular task, that is to say, after several repetitions of the task. This indicates that young tutors needed to be convinced of the learner's ability to complete the task in order to let them perform at their own pace. In other words, the young tutor was focussing on the learner's existing skills, and not on an age-related reduction in ability, while nevertheless responding appropriately to that condition.

How it would be possible to ensure that teenaged natural tutors take the needs of older learners into account in a reversed IGL framework without being informed about those needs during preparatory training?

An alternative idea based on the following theoretical analysis will be introduced in this article, by demonstrating that young tutors' ability to implement scaffolding as one of the major interactive tutoring techniques indicates that they are able to apply most of the principles of older-age learning without paying undue attention to them. First, the concept of scaffolding will be briefly described.

The concept of scaffolding

The scaffolding technique was first introduced by Wood, Bruner, and Ross (1976) as 'one form of help that more knowledgeable others can provide to the learner'. Scaffolding is a type of assistance provided by a tutor in order to direct the learner's activity within a "Zone of Proximal Development" framework (Vygotsky, 1997). While the descriptions of scaffolding vary to a certain extent, all authors agree that the distinguishing feature of the technique is fading (e.g., Goldman, 2009; Wood et al., 1976), which is a gradual decrease in direct instruction (performing the task with or without commenting on own

activities, examining and/or reading the screen content, demonstrating, commanding, describing, explaining, giving feedback) and an increase in observation in a non-interventional way by hinting, prompting or giving other indirect advice. In other words, scaffolding could be called the 'art of non-teaching' (Vygotsky, 1997), in which the tutor allows the learner to act as independently as possible.

The earlier discussion about scaffolding metaphor has referred to its limits to be a practical tool for researcher being just a general discourse (Stone, 1998). For example Berk and Winsler (1995) have described scaffolding as an artful "dance". However, Chi and her colleagues (2001) have formulated 15 tactics of direct scaffolding, and the author in her previous study (Tambaum, 2017) introduced the concept of indirect scaffolding as the avoidance of any technique, including direct scaffolding**.** Thereby, practitioners are now able to use scaffolding and its use can be measured more precisely.

According to Chi and colleagues (2001), direct scaffolding tactics include hinting, pumping, redirecting the learner, decomposing the task, maintaining goal orientation or reminding the learner of some aspect of the task, describing the problem in order to orient the learner to the important features, making fill-in-the-blank kinds of requests, initiating the reasoning step, asking a leading question, highlighting critical features, comparing the current problem with a previously solved problem, providing an example, providing physical props, completing the learner's reasoning step or 'splicing in' the correct answer, and executing parts of the task. The above list shows that the main function of scaffolding is to assist the learner to make a correct decision or to discover the next step.

The dialogue presented in Example 2 illustrates the use of scaffolding tactics formulated by Chi and colleagues (2001). In this example the teenaged tutor instructs the older learner in the use of E-Ticket Office.

Example 2

Tutor: Right, right, and let us go and see the play 'Window to the sun' instead.
Learner: Yes.
Tutor: When you are certain of the tickets. Now, down there is the button 'Continue'.
Learner: (Scrutinises the screen) Eee Ticket Office. Wait. Button 'Continue'.
Tutor: Yes.
Learner: (Searches the screen) Mhmh.
Tutor: That´s it. You do not want the ticket, do you. You do not want to register, do you. Then
Learner: I ... (scrutinises the screen)
Tutor: ... on the left (pause 4 sec)
Learner: Left? (Scrutinises the screen) Oh, the button 'Continue'!
Tutor: Right, 'Continue'. You always have to read what is on the screen.

This is an example of appropriate tutoring, in which the tutor does not demonstrate, point out or refer in advance to text and features on the screen that lead to the next step but supports the learner to find them by himself. In this example the following scaffolding tactics are used by the tutor: (Line 3) decomposing the task, (Line 5) pumping, (Line 7) maintaining goal orientation, and (Line 9) hinting.

Indirect scaffolding describes an interaction in which the tutor is available to the learner, but only observes the learner acting independently and does not interfere even when the learner faces a problem, is thinking, or tries to make or makes a wrong move. Indirect scaffolding has been identified as a distinct technique particularly applicable to

teenagers' naturalistic tutoring since young tutors tend to offer help before that help is requested (Tambaum, 2017).

It has been shown that adult learners prefer instructional support based on scaffolding rather than direct instruction or a combination of instructional approaches (Wood, Lanuza, Baciu, MacKenzie & Nosko, 2010). In addition to this preference, scaffolding reduces the risk of a more knowledgeable person's adopting a dominating style, which may have a negative impact on the less competent party, as shown by Arcidiacono and colleagues (2011), and lessens the possibility of ignoring the existing knowledge of the learner (Bozoki et al., 2013). Chi and colleagues (2001) have described the scaffolding technique in relatively clear and specific terms, which facilitates training in scaffolding skills. For example, it would be more complicated for the young naturalistic tutor to understand the idea of learners being active and independent rather than giving them hints or decomposing their task. It should be noted that scaffolding techniques are particularly useful in e-skills tutoring, as usability based on an intuitively comprehensible navigational structure is a basic characteristic of websites today. The tutor could ask the learner where he or she thinks an object is on the screen rather than demonstrating or explaining. These arguments support the use of scaffolding by teenaged tutors who are facilitating older-age e-skills learning.

As described above, tutoring principles such as flexibility, consideration of diversity, support for the learner's sense of security, etc. can be applied in order to meet the needs of older learners. The links between these principles and the concept of scaffolding, which have been identified through theoretical analysis, are presented and discussed in the following section.

Application of older-age learning principles through implementation of the scaffolding technique

The tutoring principle of *flexibility*, including the appropriate pace of learning, is supported by the nature of scaffolding, which is based on what the learner is prepared and able to do at each step of the tutoring process.

As described above, young tutors following their natural style of instruction do not always adopt the pace that the learner requires. In previous research we observed that most of the techniques that young people used were non-interactive: explanations and commands predominated (Tambaum & Normak, 2018). The pace of the most frequently employed techniques was determined by the tutor. Most of the tactics used in scaffolding allow time for the learner to respond. In other words, the learner dictates the pace of instruction.

The principle of *security* is intrinsic to the practice of scaffolding. The scaffolds embodied by the instructor provide learners with readily available assistance. The scaffolding tutor is advised to create an atmosphere in which the learner is not afraid of making mistakes. It is nevertheless important to distinguish steps to prevent mistakes from those that create a secure environment within which mistakes may be made.

Manuals and predefined programmes in which the recommendations are not based on scaffolding theory describe the tutor's role in providing a sense of security as follows: 'They [an older students] just need a little help and guidance, plus the reassurance of having a safety net as they explore this new technology, and you can give them that just by being there' (https://www.telstra.com.au/content/dam/tcom/seniors/pdf/new-guides/presenters-guide-new-accessible.pdf, p. 1). In our studies, this passive presence

has been given a distinct name – indirect scaffolding (Tambaum, 2017; Tambaum & Normak, 2018).

In order to incorporate the principles of *diversity and interconnectivity*, the tutor must be able to create links between new material and the learner's existing knowledge. Scaffolding achieves this by means of two possible tactics: 'providing examples' and 'comparing the current problem with one that was solved previously'. Fading – a distinguishing features of the scaffolding technique – generally provides the opportunity to discover the learners' individual characteristics, as fewer direct instructions on the part of the tutor, such as explaining or demonstrating, provide more opportunities for learners to present and explain the associations and relationships of the new material to their existing knowledge.

A sense of success is achieved when the learner is able to apply the acquired skills and knowledge. During the learning process, learners need to be given the opportunity to practice new skills until they succeed. Fading also assists in accomplishing this goal. One scaffolding tactic recommends dividing the task into smaller components (decomposing), thus decreasing the likelihood of failure.

The principle of *independence and activity* requires the tutor to play a supportive role and the learner to acquire new knowledge and skills through active participation. Learners take responsibility for their own progress. Educational gerontology emphasises that learners should be encouraged to do as much as possible themselves, no matter how much time it takes or how often they 'stumble'. This approach is an innate characteristic of scaffolding.

This principle also has another significant aspect. The learner must be consciously directed towards independent learning not only at that moment but also in the future. The principle of *sustainability* is also relevant – the method of instruction must safeguard the volition of older learners and provide the skills to continue their self-development. These future-oriented requirements are pertinent to the organisational aspects of older-age learning, and extend beyond the practice of scaffolding. The principle of sustainability in facilitating older-age learning needs to be emphasised in the preparation of young tutors for IGL (Buffel et al., 2014).

Enjoyability and *comfort* are principles that do not directly relate to scaffolding. Scaffolding can actually be quite uncomfortable for the learner because the tutor's aim is not to provide correct answers and avoid errors, but to intervene only in the event of false responses and irresolvable problems. However, if support is given correctly, it should be possible for the older learner to acquire new skills in an enjoyable manner, especially if the role of the tutor is explained to the learner at the outset.

The principle of *usefulness* refers to the learners' ability to apply new skills and knowledge in their future activities. This principle is respected when the tutor is familiar with the learner's interests. Tambaum and Normak (2014) have concluded that a questionnaire or other tool or method of identifying the interests, habits and everyday routines of the older learner should be developed and provided to the young tutor during the IGL preparatory phase. Such preparation would support the creation of trust between the tutor and learner, which seems to be crucial to implementing direct and indirect scaffolding techniques.

The principles of *modernity* and quality of the content are essential to older-age learning. Scaffolding in itself obviously does not guarantee that the content is up-to-date; nevertheless, scaffolding as an interactive style of instruction should increase the likelihood that the older learner would be motivated to remain interested in learning new things.

The older-age learning environment should also support *competitiveness*, i.e., the ability to resist the subtle pressures of ageism. While this is not directly related to the scaffolding style of tutoring, ensuring that preparation for IGP encourages tutors to focus on an appropriate style of instruction instead of on age specificities would provide a good basis for broader discussions on the ways in which stereotyping and discrimination can be counteracted.

Scaffolding is one way to realise the principle of the *quality of the tutoring process*, as we know that adult learners prefer instructional support based on scaffolding rather than direct instruction or a combination of instructional approaches (Wood et al., 2010).

Discussion

As mentioned above, participation in learning activities does not automatically guarantee a positive outcome for older individuals. This is important, as we know that tutoring now represents a much wider field of activity than in the past, when it was principally regarded as a formal occupation (Bruner, 1996; Strom & Strom, 2011, 2012; UIL, 2015).

According to Graesser and colleagues (1995), non-professional, or 'natural' tutors, require preparation for their task in order to avoid a negative impact and risk of failure in older-age learning (Strom & Strom, 2012). Scholars in the field of older-age learning and IGL share the belief that age-specific knowledge, such as reduced cognitive speed or decreased short-term memory, should be introduced prior to instructing older people (Formosa, 2012; Thomas, 2012). Few surveys of teenaged natural tutors who are facilitating older learners' e-skills support this belief (Tambaum, 2017; Tambaum & Normak, 2018), yet the principles of communication pertaining to the special needs of older-age learners are often printed in manuals for young tutors undertaking intergenerational e-skill learning projects (e.g., cyber-seniors.ca/get-involved/become-a-cs-mentor; genyes.org/resources; www.geengee.eu/geengee/; www.intergenerational-ictskills.eu/cms/).

As age-related changes are interpreted as disadvantages in the capitalist world (Fenwick, 2012), an implicit focus on learners' reduced abilities would diminish the opportunity for 'stereotype dilution' among the younger generation, as the similarities between the young tutor and older learner would be much more difficult to discover in the course of IGL (Hilton & Fein, 1989).

It has been shown in the literature that older learners' specific needs can be met through the implementation of geragogical principles (Tambaum, 2015). These principles are somewhat complex, and it is likely assumed that they would be applied by professional tutors. However, within the context of community learning, in which teenagers play the role of tutors, their preparation would probably not reach a professional level.

A more plausible solution to preparatory sessions for natural teenaged tutors has been proposed, based on a theoretical comparison of the scaffolding technique (Chi et al, 2001; Goldman, 2009; Wood et al., 1976) on the one hand, with tutoring principles derived from research on older-age learning on the other (Tambaum, 2015).

It has been shown that the tutor who is able to provide learning support through scaffolding tactics can be flexible and adopt the pace that learners require when thinking, executing new skills, dividing their attention between objects, etc. Scaffolding helps to reduce the cognitive load on the learner by reducing the number of demonstrations, commands and other non-interactive techniques that the learner would be required to imitate and remember. The trust established through scaffolding gives older learners a

sense of security. Fading, which is a distinguishing feature of the scaffolding technique, provides the opportunity for the learner to be as independent and active as possible, and to form connections between new and previous knowledge.

Nevertheless, scaffolding and implementing other interactive techniques may not address all the principles of older-age learning that help to meet their specific needs. For example, a scaffolded learning process may be quite uncomfortable for older learners, as the tutor has not provided an easy way for them to perform learning tasks. The principle of usefulness in the sense of time saving might also be perceived as lacking. As the learners will probably make many more mistakes and encounter more difficulties with a scaffolding process as compared with an approach based on commands and demonstration, which mainly requires imitation, their confidence in their ability could conceivably be undermined. Therefore, older learners should be informed about the nature of the tutors' preparation and if necessary, scaffolding and other interactive techniques should be introduced to them. This would also neutralise a possible 'stereotype threat' (Abrams et al., 2006) to older learners.

In previous research we introduced the idea that in a reciprocal learning model the older learner could also receive preparatory training in interactive tutoring techniques in order to serve as a resource person for the young tutor (Tambaum & Normak, 2018). The hypothesis was advanced that in IGL projects in which older learners are given the opportunity to reflect on the tutoring techniques that will be used by their young tutor in the process of learning Internet skills there would be a much greater usage of interactive techniques, including scaffolding, compared with similar IGL projects in which learners are not provided with such preparation.

Whether young tutors acquire knowledge of how to support older learners via special preparatory training or whether they can expect advice about tutoring techniques from the learner during the session, natural tutors' uncertainty, which would not support the learner's cognitive development, (Tudge, 1990, in Arcidiacono et al., 2011) will be decreased.

Conclusion

In this article the author proposes training young tutors in interactive tutoring skills rather than in the age-specific needs of older learners when preparing them for facilitating older individuals' e-skills. The reason for avoiding focusing on the differences between older and younger learners is derived from the fact that only perceived similarities between members of in- and out-groups can diminish the stereotypes that each group holds about the other. The connections between the principles that apply to older-age learning and the techniques of scaffolding show that if a young tutor is trained in the latter, the older learner is more likely to be instructed in a way that takes the characteristics of old age into account without directly focussing on them.

The analysis presented in this paper summarises and combines the results of recent research; its theories and conclusions will require validation from empirical studies.

Acknowledgements

The study was supported by European Social Fund and PRG71 Contemporary demographic developments in Estonia: In search of pathways towards a more sustainable society by Estonian Research Agency.

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